WHAT IS CLAIMED IS:

1. A method for differentiating monocytic dendritic cell precursors into immature dendritic cells, comprising:

a) providing a cell population comprising non-activated monocytic dendritic cell precursors;

b) contacting the non-activated dendritic cell precursors in a culture vessel with a dendritic cell culture media supplemented with granulocyte-macrophage colony stimulating factor in the absence of additional cytokines.

2. The method according to claim 1, wherein the monocytic dendritic cell precursors are non-activated.

3. The method according to claim 2, wherein activation of the monocytic dendritic cell precursor cells is prevented by inhibiting the adhesion of the precursor cells to the culture vessel.

4. The method according to claim 3, wherein the adhesion of the monocytic dendritic cell precursor cells is inhibited by contacting the cells with a dendritic cell culture medium comprising a high concentration of an animal or human protein.

5. The method according to claim 4, wherein the animal or human protein is an albumin, serum, plasma, gelatin, or poly-amino acid.

6. The method according to claim 1, wherein the activation of the monocytic dendritic precursor cell is inhibited by contacting the cells with a dendritic cell culture media comprising a metal chelator.

7. The method according to claim 6, wherein the metal chelator comprising EDTA, or EGTA.

8. The method according to claim 3, wherein the adhesion of the monocytic dendritic cell precursor to the culture vessel is inhibited by contacting the cells with a low cellular avidity culture vessel.

9. The method according to claim 8, wherein the low cellular avidity culture vessel comprises polypropylene, Teflon®, or PFTE.

10. The method according to claim 5, wherein the protein is human serum albumin.

11. The method according to claim 3, wherein the human serum albumin is present at a concentration of at least 1 %.

12. The method according to claim 11, wherein the human serum albumin is present at a concentration of about 2 % to about 10 %.

13. The method according to claim 1, wherein the dendritic cell culture medium is a serum free medium.

14. The method according to claim 1, wherein the cell population comprises peripheral blood, a leukapheresis product, an apheresis product, cord blood, spleen, lymph node, thymus, or bone marrow.

15. The method according to claim 14, wherein the cell population has been cryopreserved.

16. The method according to claim 4, wherein the culture vessel comprises, polystyrene, glass coated polystyrene, styrene or glass.

17. The method according to claim 14, wherein the dendritic cell precursors are further enriched by tangential flow filtration.

18. The method according to claim 17, wherein the filter has a pore size of 5.5 micron, the recirculation (input) rate was about 1400 ml/min, the filtration rate was about 17 ml/min, and the filtration time was about 90 min.

19. The method according to claim 1, further comprising contacting the differentiated dendritic cell precursors with an antigen of interest for a time period sufficient for antigen uptake.

20. The method according to claim 19, further comprising contacting the differentiated dendritic cell precursors with a dendritic cell maturation agent.

21. The method according to claim 20, wherein the dendritic cell maturation agent comprises is Bacillus Calmette-Guerin (BCG), lipopolysaccharide (LPS), TNFα, Interferon gamma (IFNγ), or combinations thereof.

22. The method according to claim 21, wherein the maturation agent is a combination of BCG and IFNγ.

23 The method according to claim 19, wherein the antigen is a tumor specific antigen, a tumor associated antigen, a viral antigen, a bacterial antigen, tumor cells, a nucleic acid encoding the antigen isolated from a tumor cell, bacterial cells, recombinant cells expressing an antigen, a cell lysate, a membrane preparation, a recombinantly produced antigen, a peptide antigen, or an isolated antigen.

24. The method according to claim 10, further comprising cryopreservation of the dendritic cells.